New Books.

Instructions in Practical Surveying, Topographical Plan Drawing, and Sketching Ground without Instruments. By Professor G. D. Burr. Second Edition. Murray, Albemarle-street. 1847.

Although chiefly intended for military students, being, indeed, prepared for the cadets of the Royal Military College, this work will be found of great use by all who desire to acquire an art daily becoming more important. Surveying by the theodolite is clearly explained, and the use of the field-book, protractor, and plane table. The method of drawing hills and sketching them on the ground, is treated of at some length, including some valuable remarks on shade and oblique light.

Railways for the Many, and not for the Few. By Mr. Jas. Ward. Smith, Elder and Co.

The main object of this pamphlet, of which a second edition has just now appeared, is to advocate the reduction of railway shares to about 5*l.* each, in order to bring them within reach of that very numerous class of investors, who now have only the savings' banks to resort to. We have long entertained similar views: although such an arrangement might give more trouble in the management of a company, we are satisfied it would prove advantageous to the nation if extensively adopted.

At the close of the pamphlet, Mr. Ward raises his voice against the farcical delusion, perhaps self-delusion too, which is being practised by the managers of what are called *Building Societies*. He quotes the first annual statement of one, which professes to shew a net profit during the year on each share, whereon 6*l.* only had been paid up, of 10*l.* 17*s.* 5*d.*!! We have seen several precisely similar; the mistake by which they arrive at so gratifying and attractive conclusion being, that they regard "all the income from fines and premiums, *paid by the shareholders themselves*, as so much profit which the shareholders have made."

Correspondence.

mode of measuring artificers' work.

Sir,—In The Builder of Saturday, January the 16th instant, I observe, under the head, "Royal Institute of Architects," some remarks on the subject of measuring builders' work.

The chairman is reported to say, "The mode of measuring stone was especially empirical. Measuring first the cube stone, then face, bed, and joint, as plain work, then the sunk work, and then the moulded work, led to a false result."

I shall feel very much obliged to you, Mr. Editor, or to any of your very able correspondents, to be informed of the quackery or falsification in this mode of procedure, in order to pay the operative fairly for the material and labour, presuming that he surely is entitled to be paid for both.

I willingly admit, that my fashion in measuring builders' work is rather ancient, but not empirical; and I contend, that the only fair way between the employer and the employed, is to dissect the work as much as can possibly be done. I shall, therefore, be most anxious to hear of a better method.

I am, Sir, &c., A Measurer.
20th Jan., 1847.

a gallery of british art.

Mr. Editor,—In an extract of last week's Builder, from "Haydon's Lectures on Painting and Design," I found the following observation:—"Within my own time, works of all classes of art, which, if collected in one gallery, would inevitably set British art in its true colour before the world." Now, Mr. Editor, how much is it to be lamented, that when the Government undertook to erect a National Gallery, they did not take into consideration a building sufficiently capacious to admit of a gallery, or galleries, to be appropriated solely to British art and artists, whether as regards painting or sculpture. In the present gallery, the works of our own countrymen and artists are obliged to be mixed up with the works of foreign schools. Some alteration, ere long, must take place in what is termed the National Gallery,—a name quite out of character with its appropriation, as regards works by native artists. The Gallery will soon be found too small for its present purpose, independent of which it is ill adapted, and I believe that many liberal and spirited individuals, who might feel disposed to bequeath their collections to the nation, would be sorry to see them placed in such an ill-ventilated building. Much has been said and written of late, by parties, respecting the state of the pictures; but I believe those who have been induced to pass censure on individuals who have the charge of them, have never once taken into consideration the injury pictures sustain from an ill-ventilated gallery, the dust from the visitors, and also in cleansing and sweeping.

I am, Sir, &c., A Subscriber.
Jan. 25th, 1847.

builders' estimates.

Sir,—As your columns are at all times open to represent the evils, and expose the present system of competition, injurious alike to all parties concerned, I beg to forward for insertion in your valuable journal, the following almost unparalleled instance of the evils above referred to, in a contract for the erection of eight houses for the Peckham Building Investment Company, on some land adjoining the Licensed Victuallers' Asylum, Old Kent-road. The plans and specifications were made by Mr. George Smith, of Mercers' Hall; and the tenders were delivered on the 28th of last month.

Green	£3,920
Brewer	3,800
Knight	3,460
Harding	3,126
Trego	3,120
Patrick	2,948
Cooper and Davis	2,880
Walker and Lopez	2,860
Marshall	2,787
Church	2,700
Winward	2,544
Litchfield	2,446
Woolaston and Muggridge	2,166
King	2,000
Pettinger	1,943

The difference between the highest and lowest tender being 1,977*l.*

I leave your numerous readers to draw their own conclusions from the above fact. Cannot some of your able correspondents suggest means, either by association or otherwise, whereby the honest tradesman could be protected from the injuries such a system entails?

I am, Sir, &c., Scrutator.
Jan. 21st, 1847.

tenders for a cotton mill.

Sir,—I send you an account of the tenders for rebuilding a cotton mill at Pleasley, near Mansfield, Notts, as published in the *Nottingham Journal* of January 22, 1847.

Messrs. Walker, Notts	£7,986
Mr. C. Lindley, Mansfield	8,400
Messrs. Burton and Sons	15,090

If Messrs. B. and Sons have come into the country with the idea of "astonishing the natives," it will be some gratification for them to know that they have fully succeeded.

I am, Sir, &c., A Subscriber.

Mr. Eastlake and the National Gallery.—We are sincerely glad to be able to contradict the report that Mr. Eastlake has resigned his appointment in the National Gallery, to which we gave publicity last week. It came to us with such authority that, though much surprised by the intimation, we were unable to question its truth. We trust the public may long retain there the advantage of his knowledge and integrity. On Monday night, Mr. Hume moved "for a copy of the minutes of the trustees of the National Gallery, during the years 1845 and 1846, with the names of all the trustees present at each meeting; also for copies of the orders and instructions to the keeper of the gallery respecting the cleaning of the pictures, and any directions in respect to their arrangement." Sir Robert Peel seconded the motion, and very properly desired honourable members to suspend their judgment on observations which had been elsewhere made, until official documents were laid before them.

Miscellanea.

The Menai Bridge Experiments.—These experiments on the large scale, of which we before gave engravings and notices, have been continued till now, and are quite satisfactory. The only point on which doubt remained was as to the ability of the bridge to withstand the effect of gusts of wind by its lateral strength. For the purpose of bringing this to the test, some further experiments have just been completed. The following are some practical details of the most valuable of these experiments:—The result of the experiments clearly proves that the lateral stiffness of the tube is sufficient to resist the strongest wind which can act upon it—that is to say, for a *constant blast*, for should the blasts recur at regular intervals (which I believe they sometimes do), the vibrations would of course be increased. Taking the force of the wind at 50 lb. on the square foot, which greatly exceeds any recorded measure, the resistance offered by the Menai bridge would be about 300 tons X 2=600 tons, which is not two-thirds of its own weight; so that if the Menai tube, or a similar tube, support its own weight, when laid on the side, the weight thus supported would exceed the pressure of the wind. Now, the model tube, which is in every respect a similar tube to the Menai, being one-sixth of the dimensions, weighs 6·2 tons, and when laid on the side deflects ·85 in. only. The greatest weight we loaded it with in this position was 26,781 lb. (12 tons) X half its own weight=15 tons, with which the total deflection was 3¼ in. Under this weight the tube showed no signs of falling; but as we did not wish to injure the tube, no more weight was added. When in its natural position this tube deflected 3·2 in., with 60 tons, which after being left on for sixteen hours increased the deflection to 3·35 in. Since that time the tube has been loaded again with 60 tons, which have been left on for ten days, and the deflections at the end of that time only exceeded ¼ of an inch. The calculated breaking weight of this tube is about 80 tons. I subjoin the areas of the different parts of the tube as it now stands:—Top=24 square in. of metal throughout. Bottom=22·3 square in. of metal at centre. Do.=9·0 square in. of metal at ends. Two sides=9·6 sq. in. of metal, same throughout 75 ft. between supporters. Top, 1·10 in. thick. Sides, 1·12 in. thick. Bottom double, 5-16 in. thick at centre. Do., single, ¼ in. thick at ends.—*Railway Chronicle.*

Ventilation at Westminster.—Complaints of the alternate blowing of hot and cold blasts into the Court of Common Pleas still continue, as plaintive and piteous as ever. Mr. Serjeant Gaselee declared the other day that his "learned brothers of the bar were kept in such a state of alternation between heat and cold, that he would not answer for their lives." Mr. Rae and himself had penetrated to the poles and tropics of these northern blasts and southern simooms; and "had found persons there turning on hot and cold air alternately." Lord Chief Justice Wild, had commanded the breezes to blow gently, and he was surprized that his injunctions had not been obeyed. M. Badeley, who spoke from the back seats, must have been very badly off indeed, in that far distant region of the court; for he assured the court itself, that there "the cold air was really most dreadful." The reporters, too, have since declared, that they were, at that precise moment "bordering on petrifaction;" after which, in general, "comes a semi-par-boiling;" tending, however, according to a recent French authority, towards the same scientific end, although, in this case, not by congelation, but by the singular and interesting power of evaporation. By the science of contraries however, or rather of contradictories, probably, the reporters firmly believe, that "in general, the icy-cold draughts of air are reserved for the coldest days of winter; the hot blasts being carefully preserved for the dog-days."

A Consolatory Precedent.—"All degrees of nations begin with living in pigsties. The king or the priest first gets out of them; then the noble, then the pauper, in proportion as each class becomes more and more opulent. Better tastes arise from better circumstances; and the luxury of one period is the wretchedness and poverty of another."—*The late Sydney Smith.*

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